DOCUMENT RESUME

ED 304 778 EA 020 800

TITLE Education: Key to Economic Growth: Recent Major Education Initiatives in Support of Economic Development in New York State.
INSTITUTION New York State Education Dept., Albany.
PUB DATE Jan 89
NOTE 31p.
PUB TYPE Reports - Descriptive (141) -- Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Economic Development; *Economic Opportunities; Economic Progress; Economics; *Educational Opportunities; *Educational Policy; *Educational Quality; Educational Research; Educational Trends; Elementary Secondary Education
IDENTIFIERS *New York

ABSTRACT

This report describes major education initiatives in support of economic development in New York State. The report sketches the major changes taking place in New York State's economy and reviews the role of educational institutions in upgrading standards, retraining the state's labor force, and providing information and research services. It also describes initiatives that directly affect the availability of a skilled work force and activities that contribute to the long-term economic health of New York State. Initiatives by the governor and the legislature to enhance economic development through education in the following five areas are discussed: (1) youth programs; (2) adult programs; (3) access programs; (4) teacher preparation/professional development; and (5) institutional resources. Appended is a list of programs and contact persons responsible for education-related economic development initiatives. (SI)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED304778

Education, Key to Economic Growth

Recent Major Education Initiatives in Support of Economic Development in New York State

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Robert M. Trombley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The University of the State of New York/THE STATE EDUCATION DEPARTMENT
Albany, New York 12234

EA020800

NEW YORK
THE STATE OF LEARNING

EDUCATION: KEY TO ECONOMIC GROWTH

Recent Major Education Initiatives in Support of Economic Development in New York State

This report reviews ongoing changes in the economy and highlights current education initiatives in support of economic development.

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Albany, New York 12234

January 1989

THE UNIVERSITY OF THE STATE OF NEW YORK

Regents of The University

MARTIN C. BARELL, *Chancellor*, B.A., I.A., LL.B.	Muttontown
R. CARLOS CARBALLADA, *Vice Chancellor*, B.S.	Rochester
WILLARD A. GENRICH, LL.B.	Buffalo
EMLYN I. GRIFFITH, A.B., J.D.	Rome
JORGE L. BATISTA, B.A., J.D.	Bronx
LAURA BRADLEY CHODOS, B.A., M.A.	Vischer Ferry
LOUISE P. MATTEONI, B.A., M.A., Ph.D.	Bayside
J. EDWARD MEYER, B.A., LL.B.	Chappaqua
FLOYD S. LINTON, A.B., M.A., M.P.A.	Miller Place
MIMI LEVIN LIEBER, B.A., M.A.	Manhattan
SHIRLEY C. BROWN, B.A., M.A., Ph.D.	Albany
NORMA GLUCK, B.A., M.S.W.	Manhattan
JAMES W. MCCABE, SR., A.B., M.A.	Johnson City
ADELAIDE L. SANFORD, B.A., M.A., P.D.	Hollis
WALTER COOPER, B.A., Ph.D.	Rochester
GERALD J. LUSTIG, B.A., M.D.	Staten Island

President of The University and Commissioner of Education
THOMAS SOBOL

Executive Deputy Commissioner of Education
THOMAS E. SHELDON

Assistant Commissioner for Policy Analysis and Program Accountability
(Vacant)

Supervisor, Education Policy Research Unit
NANCY W. CROCE

The State Education Department does not discriminate on the basis of age, color, religion, creed, disability, marital status, veteran status, national origin, race, or sex in the educational programs and activities which it operates. Inquiries concerning this policy of equal opportunity and affirmative action should be referred to the Department's Affirmative Action Officer, Education Building, Albany, NY 12234. Phone (518) 474-1265.

FOREWORD

During the past year, the Board of Regents and the State Education Department, the Legislature, and the Governor have undertaken a number of actions that will continue to enhance the quality of educational programs and support the economic development of the State. Foremost among these are:

- Enactment of a $8.0 billion State Aid to the Schools program, which represents an increase of $632.0 million over the last fiscal year;
- Support amounting to over $69.0 million for the Community Schools program, Youth-at-Risk and Community Partnership, and Attendance Improvement/Dropout Prevention programs to strengthen educational and support services to at-risk youth and their communities; and
- Support for higher education amounting to $3.4 billion, representing an increase of nearly $200.0 million over 1987-88.

This report describes major education initiatives in support of economic development in New York State. It was prepared to take stock of recent actions of the educational system that promote economic growth in the State and to provide a framework for new initiatives in support of the State's economy.

The report sketches the major changes taking place in New York State's economy, and reviews the role of educational institutions in upgrading standards, retraining the State's labor force, and providing information and research services. It also describes initiatives that directly impact on the availability of a skilled work force, and activities that contribute to the long-term economic health of our State. This edition of "Education, Key to Economic Growth" identifies Department staff with program responsibility for the initiatives contained in the report.

Thomas Sobol

CONTENTS

I. Background 1

II. Implications of a Changing Economy 2

III. Efforts in Progress, 1988-89 3

A. Youth Programs 4

1. Basic Education/Remedial Instruction 4

Equivalent Attendance State Aid 4
Computer Literacy 4
School-to-Work Transition 5

2. School Retention/Dropout Prevention 5

Attendance Improvement and Dropout Prevention Programs 5
Stay-In-School Partnership Grant Program 5
Youth-at-Risk 6
Liberty Partnership Program 6

3. Improve the Quality of Schools 6

Community Schools Program 6
School and Business Alliance 7
School-Business Partnerships 7

B. Adult Programs 7

1. Literacy and Basic Education 7

Adult Education Act 7
Employment Preparation Education Program 8
Workplace Literacy 8
Welfare Education Program 8
Adult Literacy Education Program 8
Job Training Partnership Act State Education Coordination and Grants 8
State Legalization Impact Assistance Grants 9

2. Training 9

Employer-Specific Training 9
Entrepreneurship Education Training 9
Tuition Assistance for Dislocated Workers 10

Apprenticeship and Supplemental Instruction Program 10

C. Access Programs 10

Higher Education Opportunity Program (HEOP) 10
Educational Opportunity Program (EOP) and Search for Elevation and Education Through Knowledge (SEEK) 11
College Discovery 11
Liberty Scholarships 11
Regents Professional Opportunity Scholarships 12
Science and Technology Entry Programs 12
Mathematics and Science Summer Enrichment Program 12

D. Teacher Preparation/Professional Development 13

Teacher Summer Business Training and Employment Program/Employer-Specific Skills Training Grant 13
Mentor Teacher-Internship Program 13
Teacher Opportunity Corps. 13
Excellence in Teaching Program 13
Empire State Challenger Scholarships and Teacher Fellowships Program 14
Teacher Resource and Computer Training Centers .. 14

E. Institutional Resources 14

Regional Education Centers for Economic Development 14
Small Business Development Center 15
Education Information Centers 15
Office of Vocational Rehabilitation District Office Programs 16
Science and Technology Foundation Programs 16

IV. Conclusion 17

APPENDIX

Listing of Programs and Contact Persons Responsible for Education-Related Economic Development Initiatives 19

EDUCATION: KEY TO ECONOMIC GROWTH

Recent Major Education Initiatives in Support of Economic Development in New York State

Continuing structural change in the national economy and intense competition from foreign countries and other states present new challenges to New York as the State economy continues to improve into the early 1990's. Our ability to stimulate economic growth and to retain business and industry within the State is challenged by the advance of new technology and the ensuing need for a trained work force. Education has a major responsibility in addressing two critical needs of economic growth: the need to enhance the quality of the labor force, and the need to promote technological innovation. Partnerships among educational institutions, business, government, and labor are essential to address these needs.

I. BACKGROUND

The 1980's have been a period of recovery following several years of economic decline during the 1970's. The State population has grown by 340,000, and total employment has exceeded 8.1 million between 1980 and 1988. In August 1988, there were 993,000 more jobs in New York State than in 1980. The unemployment rate was 4.2 percent in August 1988, whereas the United States average was 5.5 percent. Per capita personal income continued to grow faster in New York than in the United States as a whole: between 1980 and 1987 the State average increased from $10,701 to $18,004, while the national average increased from $9,919 to $15,481.

The 1970's and 1980's in general have represented dramatic changes in the labor profile impelled by technological and market forces transforming the economy. Though some sectors have remained relatively stable, the State's economy as a whole continues to be characterized by a shift from manufacturing to services and high technology goods, the rapid growth of producer and information services, the growth of small business, and the increased role

of automation in production. These changes have had a twofold impact on the State's employment patterns.

- A decline in blue collar jobs due to technological change:
  - — In August 1988, there were 1.2 million manufacturing jobs compared to 1.8 million jobs in 1970. This represents a loss of approximately 537,000 jobs or a 30.5 percent decrease in manufacturing jobs.
  - — In 1940, there were 300 manufacturing jobs for every 100 service positions. In 1960, there were 192 manufacturing jobs for every 100 service positions. In August 1988, there were 53 manufacturing jobs for every 100 service positions.
- A significant growth in services, wholesale and retail sales, and finance, insurance and real estate:
  - — In August 1988, there were 2.3 million jobs in the service sector, compared to 1.4 million jobs in 1970, an increase of approximately 69 percent or 940,000 jobs.
  - — In August 1988, there were 1.7 million jobs in the wholesale and retail trade sector, compared to 1.4 million jobs in 1970. This represents an increase of 20 percent or 291,000 jobs.
  - — In August 1988, there were 807,400 jobs in the finance, insurance and real estate sector, compared to 595,700 in 1970. Employment in this sector increased by approximately 36 percent or 212,000 jobs.
  - — In 1950, 17 percent of the State's work force was engaged in information-related work, compared to 56 percent in 1983. In 1990, an estimated 65 percent of the work force will be so occupied.

II. IMPLICATIONS OF A CHANGING ECONOMY

In any kind of economy, education is a key factor in increasing the rate and scope of economic growth. Within the context of an increasingly technological and competitive environment, education is essential not only for getting a job but also for ensuring advancement beyond entry level, minimum salary employment. Education must continue to support economic growth by developing strate-

gies that enhance the quality of the labor force, and promote technological innovation.

In response to the need to strengthen human resources for economic growth, education throughout the State needs to upgrade the following kinds of instruction:

- Basic literacy and computing skills, and liberal arts, for flexibility and adaptability required to keep up with rapid changes in a technological society.
- Occupational skills, including training and retraining for the latest advances in knowledge and technology, and career education, for greater familiarity with the workplace, preferably through contact with environments that give youth and adults a more realistic picture of business needs.
- Professional preparation in critical areas such as medicine, engineering and teaching.

Participation in educational programs is a prerequisite for individuals to attain the skills required for productive participation in the marketplace. Those who drop out of school miss the opportunity to acquire the basic skills necessary for getting and keeping a job. This will in turn hamper the development of a skilled work force, without which the State will not be able to develop a highly productive and competitive economy.

III. EFFORTS IN PROGRESS, 1988-89

In 1983 the Regents adopted a policy statement on the "Role of Education in Support of New York State's Economic Development." The report summarized educational policies to be implemented over the next decade to support the State's economic growth.

Numerous specific programs directly support the Regents policy. Many of the programs described here are specifically geared to enhance economic development by directly addressing pressing occupational human resource needs of business and industry. There are other programs, however, that are not so obviously linked to economic development but perhaps go even deeper in their ability to enhance our collective capacity to contribute to the economy. The main thrust of these programs is to develop a trained group of individuals - youth and adults - who can function effectively within a

rapidly changing economy. In line with this approach, the Regents Action Plan for Elementary and Secondary Education, and State Aid to Schools, together with the Regents Statewide Plan for the Development of Postsecondary Education, signal the State's intent to improve the quality of education and life for all New Yorkers. These measures are based on the recognition that the long-term economic health of the State is dependent on the development of a well-trained work force. New York State is laying the foundation, from the earliest grades, for the continued development of a work force equipped to contribute to the economy.

In recognition of the fact that sizable numbers of adults do not have the basic skills required of a self-supporting adult in contemporary society, the provision of basic language and computation skills now becomes a standard mission of the educational system at all levels. Subsequently, these institutions have provided adults with job training to enable their entering or remaining in the work force.

The following actions of the Governor and the Legislature in support of educational programs significantly help educational institutions to train both youth and adults for our rapidly changing economy.

A. YOUTH PROGRAMS

1. Basic Education/ Remedial Instruction

Equivalent Attendance State Aid. Equivalent Attendance State Aid provides funding to school districts and BOCES that operate programs leading to a high school diploma or equivalent, including provision of instruction in basic education and English as a second language. Approximately $7.5 million are available in 1988-89 to secondary agencies to provide instruction to students who are 16-20 years of age and without a high school diploma.

Computer Literacy. Appropriations have been made for the acquisition of computer hardware and software for all school districts during the 1988-89 school year. School districts are receiving State aid for software purchases at the rate of $3.00 per enrolled pupil, providing an estimated $9.2 million on a statewide basis. An estimated $8.5 million (up to $8.00 per

enrolled pupil) have been appropriated to school districts to purchase computer hardware. In addition, $16.3 million in computer services aid are available for the State's Big Five cities.

School-to-Work Transition Program. Under the JTPA, funding is provided to the State Education Department to provide services to eligible participants through cooperative agreement between the Education Department, local education agencies, and the local administrative entity for JTPA. In 1988-89, funds totaling more than $1.8 million have been allocated to address the needs of at-risk and disabled youth who are in school as they transition from educational programs to the world of work. Under the School-to-Work Transition Program a wide array of services such as tryout employment, on-the-job training, entry employment experience, job search assistance and job counseling are provided to assist youth overcome barriers to employment.

2. School Retention/Dropout Prevention Programs

Attendance Improvement and Dropout Prevention Programs. State aid apportionments are available to provide funds for attendance improvement and dropout prevention programs. For the 1988-89 school year, the formula provides $51.0 million for the Big Five school districts to support attendance teachers, guidance counselors, work study opportunities, and alternative education classes in school districts having low attendance. Funding for the 1988-89 school year, amounting to $1.0 million, is available for competitive grants for rural and small city school districts and BOCES, particularly for services for pregnant teenagers, and programs for students who are parents.

Stay-In-School Partnership Grant Program. This competitive grant program, amounting to $3.5 million in 1988-89, seeks to use the resources of colleges to help schools increase graduation rates in school districts having high dropout and truancy rates. Grants are available to colleges and universities for joint projects with local school districts. During this program year, 18 Stay-In-School Partnership Programs are providing support services and compensatory activities for pupils having a high risk of truancy and academic failure. It is

estimated that these 18 projects will serve over 3,200 at-risk students in 60 schools throughout the State.

Youth-at-Risk. The Youth-at-Risk and Community Partnership Grant Program was established in 1987-88 with an appropriation of $7.0 million. The appropriation was increased to $14.0 million in 1988-89. The purpose of the program is to promote the coordination of education and social services to students who are at risk of not completing high school. Grants up to $200,000 are available to school districts and BOCES for activities such as drug and alcohol abuse prevention, suicide prevention, and activities to coordinate education and prevention programs with related community efforts.

Liberty Partnership Program. The Liberty Partnership Program, an integral part of the Liberty Scholarship Program initiated in 1988, is designed to reduce the State's dropout rates, to keep students in school and to encourage them to go on to college. Scheduled to begin in 1989-90 with a recommended appropriation of $10.3 million, the Liberty Scholarship Program will provide competitive grants of up to $300,000 for any one year to colleges, universities, and community-based organizations offering a broad range of compensatory and support services to high school students identified as being at risk of dropping out of school.

3. Improve the Quality of Schools

Community Schools Program. The Community Schools Program has been appropriated $3.0 million during 1988-89, an increase of $1.5 million over 1987-88. The program is presently operating at 14 school districts throughout the State: seven in New York City and seven upstate. The program calls for schools to diversify their approach to improving education in economically distressed areas by improving instruction and by cooperating with other service providers in addressing out-of-school causes of poor performance and dropping out. The key feature of the Community Schools Program is an extended school day and year which is necessary to provide additional services: homework assistance, tutoring, and other enrichment activities; prekindergarten, day-care and latchkey services; and other related social and health services, including nutrition, drug prevention activities, and counseling services.

School and Business Alliance. Under the Governor's leadership, the School and Business Alliance unites public schools and the private sector towards improving high school graduation rates and the employability skills of youth. The 1988-89 State Budget has allocated $2.0 million, an increase of $700,000 over 1987-88, to fund educational and employment opportunity projects to be developed by local school districts and businesses under the Alliance. During the 1988-89 school year, 15 school districts having serious dropout and attendance problems are participating in the program. Local linkages with the Governor's Economic Development Zone Program are being supported by $400,000 in education funds under the Job Training Partnership Act.

School-Business Partnerships. The Business Council of New York State and the State Education Department are currently involved in promoting business and education partnerships at the local level. Schools and businesses in over 100 communities have established different kinds of partnerships such as Join-a-School, Executive in Residence and Internship Programs. The Business Council and the Department continue to disseminate information about existing partnerships and how to develop programs appropriate for a company's goals and resources.

B. ADULT PROGRAMS

1. Literacy and Basic Education

Adult Education Act. Under the Adult Education Act, approximately $8.1 million are available to New York State in 1988-89 for adult basic education instruction, counseling, life skills education, referrals, and other support services. Public and private education agencies and organizations are eligible to receive funding. Eligible participants are persons 18 years of age or older who are performing below ninth grade level in reading and/or mathematics, or who are unable to speak English well enough to participate in English speaking educational or training programs.

Employment Preparation Education Program. An emphasis on basic skills training is indispensable in efforts to enhance the employability of adults. With the enactment of the Employment Preparation Education Program in 1984, State aid was made available for adult basic education, English-as-a-Second Language, and high school equivalency programs. During the 1988-89 school year, approximately $24.0 million are available for the program, a $6.5 million increase over the previous year's appropriation.

Workplace Literacy. Funding amounting to $2.0 million is available in 1988-89 to support workplace literacy and basic skills education programs for employees of public or private employers or for union members whose present level of literacy skills constitutes a barrier to continued employment or to promotion. Labor organizations, federations of labor organizations or organizations of employers acting in consortium with labor organizations are eligible to apply for workplace literacy program grants.

Welfare Education Program. The provision of targeted educational services is an essential component of strategies to assist public assistance recipients achieve a level of literacy essential to employment. In 1988-89, $7.5 million under the Welfare Education Program are available to provide basic literacy education to out-of-school individuals who lack a high school diploma or its equivalent, are at least 18 years of age and are eligible for social services assistance.

Adult Literacy Education Program. During 1988, the State Legislature established a $3.5 million fund for the Adult Literacy Education Program. Approximately $1.0 million of these funds had been previously designated under the Welfare Education Program for public and private not-for-profit agencies to expand educational opportunities for adults receiving public assistance. The program has been broadened to include, among others, persons who are economically or educationally disadvantaged.

Job Training Partnership Act State Education Coordination and Grants. The Job Training Partnership Act (JTPA) is the principal federally financed program for providing training

and employment services to persons experiencing serious barriers to employment. Under JTPA, eight percent of the State's Title II-A allotment is allocated to the State Education Department to provide services to eligible participants in cooperation with local education agencies and local government. In 1988-89, over $3.6 million, representing 60 percent of funds available for local assistance, will provide support for programs in basic skills instruction to individuals who otherwise would not benefit from more advanced occupational training or job placement.

State Legalization Impact Assistance Grants. The State Legalization Impact Assistance Grants (SLIAG) Program provides funds to approved educational agencies which provide assessment and instruction to eligible legalized aliens seeking to attain legal permanent resident status under the Immigration Reform and Control Act of 1986. Instructional activities under the SLIAG include instruction in English-for-Speakers-of-Other-Languages, and citizenship education or other related educational programs, such as life skills education or basic skills. Public and private not-for-profit agencies with previous experience in operating these types of programs are eligible to receive SLIAG funding. In 1988-89, approximately $13.0 million are available for SLIAG program activities.

2. **Training**

Employer-Specific Training. Approximately $9.4 million in Federal and State funds are available in 1988-89 to support the employer-specific training programs. These sources are $1.2 million of Vocational Education Act funds; $612,000 from the State Education Coordination and Grants programs of the Job Training Partnership Act; $1.9 million from Title III of the Job Training Partnership Act for the training of dislocated workers; and $5.7 million from the State-funded Employer-Specific Skills Training Grant Program. It is anticipated that in 1988-89 approximately 450 employer-specific training projects will serve over 43,000 trainees. These programs are coordinated through the Regional Education Centers for Economic Development.

Entrepreneurship Education Training. The capacity of education agencies to provide technical assistance to small busi-

ness owners and employees has been tapped by projects initiated through the Regional Education Centers for Economic Development. Since July 1986, the centers have implemented 138 training projects targeted to small businesses entrepreneurs, providing training to over 7,500 individuals. An entrepreneurship education program which provides technical assistance and training to minority and women small business owners is also operated through the Regional Education Centers for Economic Development. The Entrepreneurship Education Training program is supported by $200,000 of Vocational Education Act funds.

Tuition Assistance for Dislocated Workers. Approximately $2.1 million of Title III Job Training Partnership Act funds have been reappropriated by the Legislature under Section 7 of the State Occupational Retraining and Reemployment Act to provide tuition assistance of up to $1,500 to dislocated workers needing training. Training providers must be licensed or certified by the State Education Department, and offer approved nondegree training programs in occupations with favorable employment opportunities. Currently, there are 1,307 approved programs available at 157 different provider agencies; over 6,200 dislocated workers have received or are currently receiving tuition assistance since the inception of the program.

Apprenticeship and Supplemental Instruction Program. State aid funding amounting to $2.3 million is available in 1988-89 for related or supplemental instruction for apprenticeship training in programs registered by the State Department of Labor. Each county designates a local education agency to provide programs leading to a journeyman's status. Funding is based on the number of contact hours of apprenticeship related instruction. It is estimated that this aid amounts to approximately $.84 per contact hour, supporting related instruction for approximately 18,700 apprentices.

C. ACCESS PROGRAMS

The Higher Education Opportunity Program (HEOP). With an appropriation of $20.1 million, HEOP provides grants to in-

dependent degree-granting institutions of higher education to subsidize programs of academic and financial support for college students who are educationally and economically disadvantaged. Program funds are used for testing, recruitment, counseling, tutoring, special academic coursework, laboratories and workshops, and supplemental financial assistance for approximately 6,544 full-time equivalent students.

Educational Opportunity Program (EOP) and Search for Elevation and Education Through Knowledge (SEEK). Two opportunity programs, EOP and SEEK, are targeted for students matriculating at the State University of New York (SUNY) and the City University of New York (CUNY), respectively. Like the HEOP program, EOP and SEEK are designed to provide access to postsecondary education for economically and educationally disadvantaged students. Both are comprehensive programs providing eligible students financial support as well as special counseling, tutoring, and remedial coursework. In 1988-89, $12.79 million have been appropriated for EOP and $12.82 million for SEEK.

College Discovery. The College Discovery Program provides financial aid and programs of special counseling, tutoring, and remedial course work to students, who are enrolled at City University of New York two-year colleges, and who are both economically and educationally disadvantaged. In 1988-89, $982,000 were appropriated by the Legislature in support of the College Discovery Program.

Liberty Scholarships. In his 1988 Message to the Legislature, the Governor proposed the Liberty Scholarship Program. Enacted into law during 1988, the Liberty Scholarship Program will make the first awards during the 1991-92 academic year. The focus of the program is to encourage students from low-income families to help meet the nontuition costs of a college education. This program will insure that no student in New York State is denied the opportunity to pursue a college degree due to lack of financial aid. A Liberty Scholarship award, combined with other State and Federal aid, will enable eligible low-income students to choose a SUNY or CUNY institution. Students attending private colleges would

receive awards equal to students in public postsecondary institutions.

Regents Professional Opportunity Scholarships. In 1988-89, approximately $1.4 million are available to provide awards for economically disadvantaged and underrepresented minority students who are beginning or engaged in an approved program leading to a degree in a profession licensed by the Regents or other fields designated by the Regents. Award winners may receive up to $5,000 per year, for a maximum of four academic years, unless enrolled in a program recognized by the Regents as requiring more than four years to complete. Successful applicants must agree to work in New York State in their chosen profession or field upon completion of an approved program of study.

Science and Technology Entry Programs. The Science and Technology Entry Program (STEP) and the Collegiate Science and Technology Entry Program (CSTEP) assist minority and economically disadvantaged secondary school and college students acquire skills necessary to pursue preprofessional or professional education programs of study in scientific, technical, and health-related fields. With an appropriation of $10.6 million in 1988-89, STEP/CSTEP makes grants available annually on a competitive basis to postsecondary institutions and consortia of institutions. In 1988-89, 42 projects were funded for middle and high school students and 41 for college students.

Mathematics and Science Summer Enrichment Program. The Mathematics and Science Summer Enrichment Program provides grants to higher education institutions in New York State for the purpose of conducting precollege regional summer programs designed to increase minority student interest and participation in fields based in mathematics and science. This program, funded in 1988-89 at $215,000, is based on the highly successful CAMP STAR model which stresses skills in analytical reasoning, and student and faculty interaction and support. The model also provides academic courses and laboratories in mathematics and science, and supportive services such as counseling and tutoring.

D. TEACHER PREPARATION/PROFESSIONAL DEVELOPMENT

Teacher Summer Business Training and Employment Program/Employer-Specific Skills Training Grant. An appropriation of $6.4 million is available in 1988-89 for the Teacher Summer Business Training and Employment Program/Employer-Specific Skills Training Grant. This year $4.0 million are allocated for the Teacher Summer Business Training and Employment Program and $2.4 million are available for the Employer-Specific Skills Training Grant. The Teacher Summer Business Training and Employment Program assists teachers of mathematics, science, computer science and occupational education to engage in summer work in business and industry that directly benefits their effectiveness as teachers. Funding provided through this program helps pay for 30 percent of teachers' compensation, up to a maximum of $1,000, for summer work. The Employer-Specific Skills Training Grant Program provides customized training for business and industry. Funds unexpended by September 15 for the Teacher Summer Business Program are available to support Employer-Specific Skills Training Grant Program activities.

Mentor Teacher-Internship Program. The Mentor Teacher-Internship Program provides first-year teachers with the support, guidance and leadership needed as they begin their careers. In the last two years State appropriations have doubled from $4.0 million to the current $8.0 million level. State funding supports 20 percent of a first year intern's salary and 10 percent of a mentor's salary for release time.

Teacher Opportunity Corps. Funds amounting to $1.8 million are available in 1988-89 for grants to postsecondary institutions to establish and operate Teacher Opportunity Corps programs leading to permanent certification in teaching. The program is designed to enhance the preparation of prospective teachers who are willing to teach at-risk students, and to increase participation in teaching careers by members of minority groups historically underrepresented in the teaching profession.

Excellence in Teaching Program. The Excellence in Teaching Program provides an estimated $157.0 million in 1988-89,

of which $149.9 million are targeted to school districts and $7.2 million to BOCES, for increases in teacher salaries. These funds are available to school districts upon request and must be allocated through separately negotiated salary agreements.

Empire State Challenger Scholarships and Teacher Fellowships Program. The Empire State Challenger Scholarships and Teacher Fellowships Program was established to encourage students to pursue careers in teaching. In the undergraduate program, 312 awards are available annually for students enrolled in approved undergraduate programs leading to certification in fields where there is a teacher shortage, i.e., mathematics, science, bilingual education, occupational education, and school counselor. Award winners may receive up to $3,000 per year, for a maximum of four years. Successful applicants must agree to teach the equivalent of one academic year for every two years of awards received. On the graduate level, 650 awards are available annually for students enrolled in shortage area programs. Graduate award winners may receive up to $4,000 per year. Successful graduate applicants must agree to teach for the equivalent of one academic year for every one or two years of benefits, depending on the type of award.

Teacher Resource and Computer Training Centers. State funds have again been appropriated to support Teacher Resource and Computer Training Centers. The 99 centers located statewide provide support services for teachers and seek to improve teacher competence in the application of computer technology. Funding for 1988-89 is $16.0 million, a $1.0 million increase over 1987-88. In addition to helping teachers improve their skills and competence, the centers have been instrumental in fostering partnerships between schools and business and industry. As further support for the program, companies provide computer equipment, software, and consultation services.

E. INSTITUTIONAL RESOURCES

Regional Education Centers for Economic Development. Ten Regional Education Centers for Economic Development

were created in 1983 to coordinate new occupational and continuing education programs, and to mount employer-specific training programs. Support for the Regional Centers is provided by Vocational Education Act and Job Training Partnership Act funds, totaling $1.2 million. The centers are located in each of the State's 10 economic development regions designated by the Department of Economic Development. The centers design customized training programs with a view to attracting and retaining companies. They also assist companies with training needs associated with technological changes, especially small businesses with start-up or growth related training needs. The centers provide a central point of contact for employers, economic developers, chambers of commerce and regional offices of the Department of Economic Development for the design and development of customized training programs for employers. The employer-specific and entrepreneurship training programs are operated through the centers.

Small Business Development Center. New York's Small Business Development Center (SBDC) program was initiated in July 1984, as a cooperative venture between the U. S. Small Business Administration and the State University of New York. The SBDC is designed to provide needed services to local or regional entrepreneurs and small businesspersons. Such services include direct counseling of entrepreneurs and small business owners to address problems inherent in the start-up and operation of a small business, and training in areas of business activity. Research is also provided for the individualized needs of the small business community. The program seeks to promote investment and employment growth within the small business sector. The program, with $1.2 million in State funds for 1988-89, supports a total of 19 strategically located campus-based centers that bring together the resources of the State University, the private sector and government at all levels in support of New York's small business and entrepreneurial sectors.

Education Information Centers. The Legislature appropriated $450,000 in 1988-89 to maintain the existing Education Information Centers (EICs). These centers are located at seven sites: the Brooklyn Public Library, the Nassau Library System, the Regional Learning Service/Onondaga County Public Li-

brary, the Clinton-Essex-Franklin Library System, the Chautauqua-Cattaraugus Library System, the 115th Street branch office of the New York Public Library, and the Westchester Educational Brokering Service. The EICs help extend access to adult learners by providing free, individualized career and educational counseling services.

Office of Vocational Rehabilitation District Office Programs. Through a network of 15 district offices, and in cooperation with over 150 rehabilitation facilities/sheltered workshops, Independent Living Centers and numerous other public and private service providers, the Office of Vocational Rehabilitation (OVR) provides services for thousands of citizens with disabilities in New York. In 1987-88 more than $19.2 million of OVR's total fiscal year expenditure of $90.1 million were available for training at rehabilitation facilities, business schools, trade schools, colleges and universities. As a result, over 9,800 persons with disabilities were placed in jobs. OVR strengthens job opportunities for disabled individuals by training disabled workers for jobs in growth industries, working with insurance carriers and the Workers' Compensation Board to rehabilitate workers injured on the job, assisting the participation of disabled persons in Job Training Partnership Act programs, and helping government agencies hire qualified disabled employees under provisions of the Civil Service Law.

Science and Technology Foundation Programs. With a view to strengthening its leadership in science and technology, the State, through the Science and Technology Foundation, supports a range of activities that brings together public and private resources with leading research universities. In 1988-89, $22.5 million were appropriated to advance the State's science and technology initiatives, an increase of $1.3 million over 1987-88.

The seven Centers for Advanced Technology (CATs), designated by the Science and Technology Foundation, exemplify a partnership among business and industry, government, and educational institutions. The role of the CATs is to stimulate the transfer of applied research and technology to industry. The centers now in existence are located at the following major research universities: Columbia University (Computers and Information Systems); Cornell University (Biotechnology

and Agriculture); Polytechnic University (Advanced Technology in Telecommunications); University of Rochester (Optics Technology); State University of New York at Stony Brook (Medical Biotechnology); State University of New York at Buffalo (Health-Care Instruments and Devices); and Syracuse University (Computer Applications and Software Engineering). Outreach to other educational institutions is made with a view to keeping them abreast of the latest technologies. A State appropriation of $10.0 million is available to support the centers during 1988-89.

Other key appropriations in support of science and technology activities include: $1.0 million for research and development grants; $1.6 million for the Science and Technology Foundation's Revolving Loan and Investment Fund/Corporation for Innovation and Development; $150,000 to assist small businesses in the application and utilization of productivity enhancing technologies; $1.2 million for matching grants to Technology Development Organizations; $500,000 for the State Industrial Innovation Extension Service; $3.6 million for Small Business Innovation Research Act Matching Grants; $800,000 for the Cornell University supercomputer project; and $2.5 million for the National Center for Earthquake Engineering at SUNY Buffalo.

IV. CONCLUSION

These initiatives are important developments to help us improve the quality of education as well as strengthen its role in support of economic development. The funding involved is modest in comparison with the entire State aid to schools allocation. However, the purposes to which these initiatives are directed drive other funds, thereby increasing the range and purpose of services that may be offered.

Many of the initiatives, e.g., the Community Schools Program, Youth-at-Risk Program, and the Liberty Partnership Program, address the major problems facing education today. When undertaken in conjunction with economic development strategies, such as the Governor's Economic Development Zones Program, these efforts have the potential to assist in the economic recovery of distressed communities and the consequent improvement of condi-

tions related to dropping out, absenteeism and antischool behavior. Basic education, career counseling, training, and job placement for at-risk populations not only support economic growth, but also provide opportunities for individuals to achieve a measure of self-sufficiency, thus diminishing the need for public assistance and related expenditures.

The research capabilities of the State's educational institutions are a key resource to business. Access by business and industry to university research centers will increase opportunities for the application of new technologies to increase productivity. The need to use the research capacities of our higher education system effectively on behalf of business and industry has been highlighted in recent reports that stress the importance of education for the economic well-being of the nation. Likewise, increased collaboration between business and industry with university research centers will enhance our ability to develop new marketable technologies.

The Regents and the State Education Department are committed to implementing initiatives that enhance the full participation of all New Yorkers in society; contribute to the State's economic resurgence; and make effective use of the State's resources. The initiatives detailed in this report reflect that commitment.

APPENDIX

LISTING OF PROGRAMS AND CONTACT PERSONS RESPONSIBLE FOR EDUCATION-RELATED ECONOMIC DEVELOPMENT INITIATIVES

Equivalent Attendance Aid:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
Computer Literacy:	Michael Radlick, Director Elementary and Secondary Education Planning (518) 473-9106
School-to-Work Transition:	Johanna Duncan-Poitier, Chief Adult Occupational Education Program Support (518) 474-3973
Attendance Improvement/Dropout Prevention Programs:	John Soja, Supervisor Pupil Support Services (518) 474-8790
Stay-In-School Partnership Grant Program:	Charles Graber, Chief Grants Administration (518) 474-5705
Youth-at-Risk/Community Partnership:	John Soja, Supervisor Pupil Support Services (518) 474-8790

Liberty Partnership Program:	Jeanine L. Grinage, Director Postsecondary Equity and Access Programs (518) 473-6810
Community Schools Program:	Candido de Leon, Coordinator Community Schools Program (212) 488-2128
School and Business Alliance:	Johanna Duncan-Poitier, Chief Adult Occupational Education Support (518) 474-3973
School-Business Partnerships:	Arthur Poole, Job Development Director The Governor's School and Business Alliance Task Force (212) 790-2488
Adult Education Act:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
Employment Preparation Education Program:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
Workplace Literacy:	Nelson Ronsvalle, Chief Economic Development Coordination (518) 474-5506

Welfare Education Program:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
Adult Literacy Education Program:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
JTPA State Education Coordination and Grants:	Johanna Duncan-Poitier, Chief Adult Occupational Education Program Support (518) 474-3973
State Legalization Impact Assistance Grants:	Russell J. Kratz, Chief Adult and Continuing Education Program Development (518) 474-8703
Employer-Specific Training:	Nelson Ronsvalle, Chief Economic Development Coordination (518) 474-5506
Entrepreneurship Education Training:	Nelson Ronsvalle, Chief Economic Development Coordination (518) 474-5506
Tuition Assistance for Dislocated Workers:	Johanna Duncan-Poitier, Chief Adult Occupational Education Program Support (518) 474-3973

Apprenticeship and Supplemental Instruction:	Johanna Duncan-Poitier, Chief Adult Occupational Education Program Support (518) 474-3973
Higher Education Opportunity Program:	Douglas P. Mercado, Chief Higher Education Opportunity Programs (518) 474-5313
Educational Opportunity Program:	Douglas P. Mercado, Chief Higher Education Opportunity Programs (518) 474-5313
Search for Elevation and Education Through Knowledge (SEEK):	Douglas P. Mercado, Chief Higher Education Opportunity Programs (518) 474-5313
College Discovery:	Douglas P. Mercado, Chief Higher Education Opportunity Programs (518) 474-5313
Liberty Scholarships:	New York State Higher Education Services Corporation, Policy Analysis,Student Information (518) 473-7197
Regents Professional Opportunity Scholarships:	Douglas P. Mercado Higher Education Opportunity Programs (518) 474-5313

Science and Technology Entry Programs:	Jeanine L. Grinage, Chief Professional Career Opportunity Programs (518) 473-6810
Mathematics and Science Summer Enrichment Program:	Zelda J. Holcomb, Coordinator Structured Minority Access Program Unit (518) 473-6810
Teacher Summer Business Training and Employment Program/Employer Specific Skills Training Grant:	Nelson Ronsvalle, Chief Economic Development Coordination (518) 474-5506
Mentor Teacher-Internship Program:	Helen Hartle, Coordinator of Inservice Education Staff Development Unit (518) 474-6440
Teacher Opportunity Corps:	Zelda J. Holcomb, Coordinator Structured Minority Access Program Unit (518) 473-6810
Excellence in Teaching Program:	Gregory Illenberg, Chief State Aid (518) 474-2977
Empire State Challenger Scholarships and Teacher Fellowships:	Douglas P. Mercado Higher Education Opportunity Programs (518) 474-5313
Teacher Resource and Computer Training Centers:	Helen Hartle, Coordinator of Inservice Education Staff Development Unit (518) 474-6440

Regional Education Centers for Economic Development:	Nelson Ronsvalle, Chief Economic Development Coordination (518) 474-5506
Small Business Development Centers:	James L. King, Director NYS Small Business Development Center (518) 443-5398
Education Information Centers:	Charles Graber, Chief Grants Administration (518) 474-5705
Office of Vocational Rehabilitation District Office Programs:	Frederick Francis, Director Operation Support Services (518) 473-4824
Science and Technology Foundation Programs:	John S. Deffigos, Executive Deputy Director Science and Technology Foundation (518) 474-8241